

## Changes to the Individual Variance made by the NCAAG<sup>1</sup>

The forerunner to the current Montana Nutrient Work Group was the Nutrient Criteria Affordability Advisory Group (NCAAG) which existed up until about 2009. The NCAAG revised the individual variance process ~~for new water quality standards found in the 1995 EPA Guidance for situations where a variance was requested based on the~~ ~~A variance from water quality standards is given because of~~ ‘substantial and widespread’ economic impacts to a community.

The NCAAG developed new socio-economic indicators of a community’s well-being, the ‘Secondary’ criteria of the Substantial test, to replace the original six Secondary indicators found in the 1995 EPA Guidance. Two of the measures, MHI and unemployment rate remained unchanged from the original six. Four of the original six ‘Secondary’ indicators were dropped and replaced by three new indicators. The NCAAG-created five indicators of a community’s health include the community unemployment rate compared to the state rate, the community poverty rate, a measure of low to median income (LMI), the average community MHI compared to the state value, and a measure of how much the community is now paying in various local fees and taxes.

~~Tina Laidlaw mentioned that the NCAAG’s new secondary scoring factors were vetted through EPA Headquarters for the public sector. EPA mentioned that they liked these five new measures, including EPA Economist Tim Connor.~~

**Commented [TL1]:** I would remove this from the memo. The focus should be on describing the rationale for the new indicators and the basis for the thresholds.

The reasons for changing these indicators were to tailor the indicators of a community’s well-being to Montana communities. The NCAAG felt that the original six indicators did not reflect the realities of local level financing or community health. Further detail about each indicator is found in the next section as well as other changes made to the individual variance process. The following major changes were made to the public individual variance process from the 1995 EPA Guidance

### Substantial Impact-Municipal Household Screener Affordability Threshold

To the Municipal Household Screener percent of Median Household Income (MHI) measure, the NCAAG added a Low to Medium Income Percentage Rate (LMI) Benchmark Comparison. In the original EPA Guidance, any town or community with a threshold under 1% on their Municipal Preliminary Screener was done with the analysis and denied a variance. ~~Montana DEQ allowed an exception to this rule where communities with less than 1% MHI to meet new~~

<sup>1</sup> Some of this comes from <http://deq.mt.gov/wqinfo/nutrientworkgroup/AgendasMeetingsPresentations.mcp>  
Sept 16, 2010 minutes

water quality standards and a high LMI could move on to the next Substantial test (the Secondary test). The reason is that a small number of communities may have income that is so skewed that a significant portion of the population would face substantial impacts from having to pay for additional treatment even though a community's MHI is high. An example is a resort town (e.g. Big Sky) where 60% of households are rich and the remaining 40% are relatively poor and may serve as the staff at the resort or at businesses in town.

### Substantial Impacts--Secondary Indicators

The NCAAG dropped the 'Bond Rating' secondary indicator in the original EPA Guidance.

Most towns in Montana do not have a bond rating. The other concern was that ~~Also, those~~ Montana towns that do have a bond rating can increase their rating by buying insurance on it, and thus it might be misleading as a measure of community health.

NCAAG dropped the 'Overall Net Debt as Percent of Full Market Value of Taxable Property' indicator. The NCAAG did not think that it was a good measure ~~in general~~ of a municipality's financial health, and that often the debt level had to do with either statutory requirements or other external factors not related to a town's financial health. ~~Representatives for the City of Helena highlighted Tim Megee (with the City of Helena at that time) made the comment that a city's debt often comes in three parts:~~ 1) City debt; 2) Overlapping debt other than city; ~~and;~~ 3) assessment structure debt. Thus, it was felt that overall net debt is a bad measure of community health and/or too complicated.

For the 'Unemployment' indicator, the NCAAG decided to keep that measure and use Montana's unemployment average as a benchmark rather than the U.S. unemployment rate. The reason for this is that Montana's unemployment rate is often quite different from that of the U.S., and thus using the U.S. rate might skew the results.

'Median House Income' indicator was kept as is in the original EPA Guidance and compared to the Montana average.

The 'Property Tax Collection Rate' indicator was dropped ~~because it was considered not~~. ~~The reason for this was that it was not thought~~ to be a good measure of community health. Collection rates could be affected by large companies protesting their taxes, for example, as has happened repeatedly in Montana. Also, the property tax collection rate has proved to be a near impossible piece of data to collect for smaller towns and counties.

The NCAAG added a 'Poverty Rate' indicator to Substantial Impacts. In the guidance, it was initially to be considered in Widespread Impacts, but instead, was felt to be a good measure of community health and a good Secondary indicator. DEQ created a histogram of the poverty rates of all towns in Montana to visually come up with break points for a "weak", "mid-range", and "strong" score compared to the benchmark.

**Commented [TL2]:** Did this really impact any of the towns? In DEQ's analysis, would any of the communities have been denied the variance but because of this aspect of MDEQ's approach were allowed to be considered? If the answer is no, I think we should clarify that this change had no effect on MDEQ's final demonstration but was a provision MT stakeholders felt was important to include.

**Commented [n3]:** KM Is it both to qualify? Or either or? I thought it was either or, i.e., even if the less than 1% MHI didn't meet the threshold, but they had an LMI over 50%, then it trumped and they moved to the secondary test. Do I not understand it correctly?

**Commented [n4]:** KM Didn't MT say that the LMI benchmark was at 50%? Therefore, Big Sky wouldn't have a 50% LMI since the MHI is above the LMI.

**Commented [n5]:** KM I can understand this point. Would like to have some numbers on this though...or some kind of evidence that they looked for a bond rating and couldn't find it.

**Commented [n6]:** KM Seems like a proactive community! Wouldn't we want to give them credit for that?

**Commented [n7]:** KM Should this say because? Is it the rationale to say why it isn't a good indicator of financial health? Would like more reasoning here. Maybe Tim McGee could fill us in.

**Commented [n8]:** KM Is this to show it is complicated?

**Commented [n9]:** KM Bad because it is complicated? Or bad because of another reason?

**Commented [n10]:** KM Where? Evidence? And wouldn't that demonstrate that they do not have good tax collection rate therefore they do not have a reliable ability to pay for the pollution control cost, therefore they cannot put in the technology? I would think this evidence is good for explaining to EPA why the town should get a variance.

**Commented [n11]:** KM Why?

**Commented [TL12]:** Any chance you can connect the thresholds to an affordability value or discuss why MDEQ considers these thresholds to be appropriate affordability thresholds?

The NCAAG added the 'Low to Medium Income Percentage' indicator (LMI) to Substantial Impacts-Secondary Indicators. The advisory committee felt that in addition to the other socio-economic measures including poverty rate, that LMI would be one of the best measures of community health and a good Secondary indicator. DEQ created a histogram of the LMI percentage rates of all towns in Montana to come up with break points for a "weak", "mid-range", and "strong" score compared to the benchmark. The break points were set using one standard deviation within the histogram mean for a "mid-point" score, and outside that range constituted a "weak" or "strong" score.

**Commented [n13]:** KM Please add in what these are

At the request of the City of Helena managers, the NCAAG added a 'Property Tax, fees and revenues' indicator which takes a relative total of a community's local fees and taxes divided by MHI and indexed by population. This indicator includes a summation of the following 1) General Government Activities-Program Revenues (Charges for Services): Fines, Forfeitures, including public works, safety, interest on debt and health, 2) Business Type Activities Program Revenues (Charges for Services): Hospital, water, sewer, solid waste, airport, business, and 3) local property taxes. This sum is then divided by the MHI of the given community and indexed to the community's population. A histogram is run on a sample of Montana towns to determine break points. This indicator is aimed at how much room community members have to pay additional fees for system improvements. The rationale is that if a town is already paying a high level of local fees and taxes, then they may not have the ability to take on as high of an increase in wastewater fees as a town with lower fees and taxes.

**Commented [n14]:** KM Why not use the average household income since you are indexing to the entire population in the town?

**Commented [n15]:** KM To make sense, I would replace "level of" with "Percentage of its income to"

**Commented [n16]:** KM delete

**Commented [n17]:** KM add in "lower percentage of its income paying fees and taxes"

### **Assessment of Substantial Impacts Matrix**

For the Assessment of Substantial Impacts Matrix found in the EPA Guidance, the question marks in the Matrix became 'X's. In other words, we gave those communities falling into the X zone (the uncertainty zone for Substantial impacts), the benefit of the doubt that they might experience Substantial impacts, and that they could move on to the Widespread test.

**Commented [KM18]:** Sure – I'm guessing to streamline since there are so many, makes sense.

### **Widespread Impacts**

**Commented [KM19]:** I think this is fine.

DEQ changed the Widespread Impacts section to meet the needs of the NCAAG and NWG. The NCAAG suggested that the widespread impacts instructions in the EPA Guidance were too vague and included too many categories. The NWG wanted the Widespread Impacts section more objective and simple. The revised Widespread impacts section starts with several questions asking the respondent to define the impact area (which may be different than the community boundaries) and the present socio-economic conditions within that area. Next are asked the The next set of questions describe the primary questions about what changes would occur to various socio-economic indicators that may result from meeting as a result of the new water quality standard. The socio-economic indicators considered include, 1) The economy in general, 2) Employment rates/jobs, 3) Poverty rates and social services, 4) Whether population would be affected, and 5) whether there would be widespread positive benefits from meeting the standards

and other indicators. If there would be widespread positive benefits from meeting the water quality standard, then that answer could offset negative widespread economic impacts. Of course, the widespread analysis will be reviewed by DEQ.

### Comparing Original and New Metrics

EPA asked DEQ to compare secondary scores for a sample of Montana towns using the revised five Secondary metrics compared to EPA's original six, to make sure our five metrics did not bias the Substantial test in favor of Montana towns. DEQ has secondary scores for over 20 Montana towns using the revised five Secondary indicators from the study DEQ did for EPA on Montana public WWTPs (e.g. why they cannot afford currently to meet nutrient criteria). Unfortunately, four of the six original secondary measures in the EPA Guidance are almost impossible to collect, and such a comparison cannot be made as a result.

The data for four of the original Secondary score metrics from the EPA Guidance (1995) are nearly impossible to collect. An effort in 2008 to collect data for these four metrics turned up largely unsuccessful, so it is very hard to compare the final Secondary scores from Montana's five metrics to what the scores would have with the original six metrics. The four metrics are 1) The Bond Rating of a town (only some Montana towns have bond ratings), 2) Overall Net Debt as Percent of Full Market Value of Taxable Property (considered a poor measure of town health), 3) Property Tax Revenues as a Percent of Full Market Value of Taxable Property (considered a poor measure of town health), and 4) Property Tax Collection Rate (most towns did not have this number). Again, two of the metrics, MHI and unemployment rate are the same and easy to collect. The following tables are provided with the sample towns and available data.

**Commented [n20]:** KM: Can you say how many you did collect? There are large cities in Montana that contain this data. [http://www.helenamt.gov/fileadmin/user\\_upload/City\\_Administration/Documents/FY2010\\_Tax\\_Levies\\_Explained.pdf](http://www.helenamt.gov/fileadmin/user_upload/City_Administration/Documents/FY2010_Tax_Levies_Explained.pdf) I found this: 'The City of Helena maintains a —AA|| rating from Standard & Poor's on its general obligation bonds.' In about 15 minutes of searching.

**Table C-3. Secondary Score Case Studies--Public WWTPs Actual Secondary Scores (2011)**

	<u>Poverty Rate</u>	<u>LMI</u>	<u>Unemployment rate</u>	<u>MHI</u>	<u>Tax Revenue</u>	<u>Total Average</u>
Baker	2	2	3	3	2	2.4
Big Fork	3	3	1	2	N/A	2.25
Billings	2	2	3	2	2	2.2
Bozeman	2	2	3	2	2	2.2
Butte	2	2	2	1	3	2
Broadus	3	2	3	2	1	2.2
Circle	3	1	3	1	2	2
Columbia Falls	2	2	1	2	2	1.8
Cut Bank	1	2	1	2	2	1.6
Deer Lodge	2	2	1	2	3	2
Ekalaka	2	2	3	1	1	1.8
Ennis	2	2	2	1	2	1.8
Eureka	2	1	1	1	2	1.4
Froid	2	2	1	1	1	1.4
Fromberg	2	2	2	2	3	2.2
Glendive	2	2	3	2	2	2.2
Great Falls	2	2	2	2	2	2
Hamilton	1	2	1	1	1	1.2
Havre	2	2	2	2	2	2
Helena	2	2	3	3	2	2.4
Highwood	3	3	3	3	n/a	3
Ismay	3	3	3	1	3	2.6
Kalispell	2	2	1	2	2	1.8
Lewistown	2	2	3	1	2	2
Libby	2	2	1	1	1	1.4
Lima	2	1	3	1	2	1.8
Livingston	2	2	2	1	1	1.6
Lolo	2	2	2	2	n/a	2
Manhattan	2	2	2	3	2	2.2
Miles City	2	2	3	1	2	2
Missoula	2	2	2	1	2	1.8
Neihart	2	3	3	2	1	2.2
Phillipsburg	2	2	1	1	2	1.6
Plentywood	3	2	3	1	2	2.2
Red Lodge	2	2	2	3	2	2.2
Roundup	1	1	2	1	2	1.4
Shelby	2	2	3	2	2	2.2
Sidney	1	2	3	3	3	2.4
St. Ignatius	1	1	1	1	2	1.2
Stevensville	1	3	1	1	2	1.6
West	2	2	2	2	1	1.8
Yellowstone						

**Table C-3. Secondary Score Case Studies--Public WWTPs Actual Secondary Scores with Original Six Metrics from EPA Guidance (2011)**

	<u>Bond Rating</u>	<u>Net Debt as %</u>	<u>Unemployment rate</u>	<u>MHI</u>	<u>Property tax</u>	<u>Tax rate</u>	<u>Total Average</u>
Baker	NA	NA	3	3	NA	NA	NA
Big Fork	NA	NA	1	2	NA	NA	NA
Billings	NA	NA	3	2	NA	NA	NA
Bozeman	NA	NA	3	2	NA	NA	NA
Butte	NA	NA	2	1	NA	NA	NA
Broadus	NA	NA	3	2	NA	NA	NA
Circle	NA	NA	3	1	NA	NA	NA
Columbia Falls	NA	NA	1	2	NA	NA	NA
Cut Bank	NA	NA	1	2	NA	NA	NA
Deer Lodge	NA	NA	1	2	NA	NA	NA
Ekalaka	NA	NA	3	1	NA	NA	NA
Ennis	NA	NA	2	1	NA	NA	NA
Eureka	NA	NA	1	1	NA	NA	NA
Froid	NA	NA	1	1	NA	NA	NA
Fromberg	NA	NA	2	2	NA	NA	NA
Glendive	NA	NA	3	2	NA	NA	NA
Great Falls	NA	NA	2	2	NA	NA	NA
Hamilton	NA	NA	1	1	NA	NA	NA
Havre	NA	NA	2	2	NA	NA	NA
Helena	NA	NA	3	3	NA	NA	NA
Highwood	NA	NA	3	3	NA	NA	NA
Ismay	NA	NA	3	1	NA	NA	NA
Kalispell	NA	NA	1	2	NA	NA	NA
Lewistown	NA	NA	3	1	NA	NA	NA

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[http://www.helenamt.gov/fileadmin/user\\_upload/City\\_Administration/Documents/fy14\\_CCIP\\_-\\_print.pdf](http://www.helenamt.gov/fileadmin/user_upload/City_Administration/Documents/fy14_CCIP_-_print.pdf)

**Commented [n23]:** really? Didn't find any?

Libby	NA	NA	1	1	NA	NA	NA
Lima	NA	NA	3	1	NA	NA	NA
Livingston	NA	NA	2	1	NA	NA	NA
Lolo	NA	NA	2	2	NA	NA	NA
Manhattan	NA	NA	2	3	NA	NA	NA
Miles City	NA	NA	3	1	NA	NA	NA
Missoula	NA	NA	2	1	NA	NA	NA
Neihart	NA	NA	3	2	NA	NA	NA
Phillipsburg	NA	NA	1	1	NA	NA	NA
Plentywood	NA	NA	3	1	NA	NA	NA
Red Lodge	NA	NA	2	3	NA	NA	NA
Roundup	NA	NA	2	1	NA	NA	NA
Shelby	NA	NA	3	2	NA	NA	NA
Sidney	NA	NA	3	3	NA	NA	NA
St. Ignatius	NA	NA	1	1	NA	NA	NA
Stevensville	NA	NA	1	1	NA	NA	NA
West Yellowstone	NA	NA	2	2	NA	NA	NA